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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,287	06/05/2001	Tomio Sugiyama	2635-16	4759
23117	7590	01/04/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			OLSEN, KAJ K	
			ART UNIT	PAPER NUMBER

1753

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 09/873,287	<b>Applicant(s)</b> SUGIYAMA, TOMIO	
	<b>Examiner</b> Kaj K. Olsen	<b>Art Unit</b> 1753	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 14 December 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires 3 months from the mailing date of the final rejection.  
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
 (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
 (b) ☐ They raise the issue of new matter (see NOTE below);  
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attached discussion. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
 5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
 6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
 The status of the claim(s) is (or will be) as follows:  
 Claim(s) allowed: \_\_\_\_\_.  
 Claim(s) objected to: \_\_\_\_\_.  
 Claim(s) rejected: 1-6, 14 and 15.  
 Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached discussion.  
 12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_.  
 13. ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The applicant has incorporated claim 15 into claim 1. Although this doesn't raise a new issue with respect to claim 1 itself, this does raise a new issue with respect to still pending claims 4 and 14. In particular, claim 4 would now require all the limitations of claims 1, 4 and the previous claim 15 and the examiner was never presented with this combination of claims previously. This is especially pertinent to the rejections of record where some references were utilized to reject the combination of claims 1 and 4 (i.e. Yamada) and some references that were utilized to render obvious the combination of claims 1 and 15 (i.e. Ueno in view of Mase). However, Yamada did not render obvious claim 15 and Ueno did not render obvious claim 4. This does not mean that a combination of claims 1, 4 and previous claim 15 are allowable, but that the examiner did not present any rejection that simultaneously anticipated or rendered obvious all the limitations of claims 1, 4 and 15 together. The examiner cannot be expected to anticipate all possible claim combinations when formulating the rejections of the claims.

### ***Response to Arguments***

2. Applicant's arguments filed 12-14-2005 have been fully considered but they are not persuasive. Applicant first urges that the examiner has mischaracterized the teaching of Ueno concerning the issue of the heater 3. Applicant's point is well taken. When the examiner referred to "insulating layer 3", the examiner should have referred instead to the insulating layer(s) 23 as reference number 3 refers to the entire heater assembly (i.e. heater element 25 and

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insulating layer(s) 23 combined). It is noted that this does not change the nature of the rejection in question, but the examiner thanks the applicant for pointing this out.

3. Applicant urges that this intermediate layer 21 is not completely sintered and hence has no crystal phase. Here it would appear that the applicant is urging that there is no crystal phase like the crystal phase of the instant invention. However, giving the claim terminology its broadest reasonable meaning, all the term “crystal phase” indicates is that the material in question (i.e. the bonding boundary) is at least partially crystalline in nature. The bonding boundary of Ueno is a combination of alumina, zirconia, and silicon dioxide. These materials are all at least partially crystalline regardless of whether they have been sintered completely, only partially sintered, or not sintered at all. Although the examiner concedes that they might not form a crystal phase analogous to the crystal phase of the instant invention, claim 1 merely requires a “crystal phase containing silicon dioxide which intervenes between” the solid electrolyte and the insulating sheet. The bonding boundary of Ueno is a crystalline material containing silicon dioxide and it intervenes between the solid electrolyte and the insulating sheet (see the previous office action). Hence, it meets claim 1 even if the crystal phase of Ueno is not analogous to the crystal phase of the instant invention.

4. Applicant also refers to a heightened heat transfer coefficient provided by bonding boundary of the instant invention. This may be the case and this may be in contrast to the bonding boundary of Ueno. However, there is no claim requirement that the bonding boundary provide a heightened heat transfer coefficient.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (571) 272-1344. The

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examiner can normally be reached on Monday through Thursday from 5:30 A.M. to 3:00 P.M. and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen, can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AU 1753  
December 29, 2005



**KAJ K. OLSEN**  
**PRIMARY EXAMINER**